**The University of Texas at El Paso**

**Department of Computer Science**

**CS 4374/5374 – Software Construction**

**Instructor: Dr. Bhanukiran Gurijala**

**Fall 2024**

**Project Part 1**

**Objective**: The main objective of this project is for the teams to develop the software configuration management (SCM) plan, checklists for reviews, coding standards, and perform design activities.

**Description**:

Every team will plan and accomplish the following during their first sprint in the project:

1. Based on the team’s choice of the programming language(s) used to implement the project, research, and define the following for each of the programming languages
   1. Coding Standards document
2. Research and define checklists that your team will use to perform the following reviews
   1. Design review checklist
   2. Code review checklist
3. Identify software configuration items (SCI) for the project. Research and define a change process and the process for accessing and maintaining various SCIs along with the repository that will be used to share SCIs among team members.
   1. Use the SCM plan template provided
4. Identify the features that would be implemented during the first implementation iteration/cycle. These should ideally be the core functionality of the proposed system and/or at least half of the proposed features.
5. Develop a design for the functionality the team plans to develop in the first implementation iteration/cycle by identifying classes (CRC), contracts, and subsystems.
   1. Use the SDD report template provided

Check-in for the Sprint will be scheduled during the first or the second week of October. More information will be posted on Blackboard. The check-in after the first week of the Sprint will also be graded (about 50 points) for this Sprint. Please come prepared for the check-in.

**Deliverables**:

The following are the deliverables at the end of sprint 1 of the project:

1. Completed Sprint schedule (Planning and Monitoring Report) - Caleb
2. Coding Standards document - Logan
3. Code Review Checklist – Jose
4. Design Review Checklist - David
5. SCM plan - Francisco
6. Design document capturing the identified CRCs, contracts, and subsystems. Provide a brief description of the design, and assumptions made. Include comments on any design choices made such as the use of design patterns, if applicable. - Whole Team
7. Report capturing at least the following sections: - Ruben
   1. **Project Explanation**: provide an overview of the project. Additionally, describe all the features that your team plans to implement in the project. Identify the features that would be part of the first increment and second increment.
   2. **Solution design**: How did the team approach designing a solution? Assumptions made. Brief justification about choices made. Comment on the completeness of the design for identified features for the first implementation iteration/cycle.
   3. **Reviews**: Explain how the team conducted reviews of the design. Briefly describe how the team checked each part of the design review checklist.
   4. **Sprint Retrospection** (Retrospect as a team): What went well? What needs improvement? What did the team learn? Action items if any for next sprint.

**Submission Instructions**:

1. Upload all deliverables on Blackboard.
2. Only one submission per team is enough.
3. The due date for submission is Tuesday, October 15 at 11:59 PM